

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L3	75	((PQQ\$ or pyrrolo\$) near3 dehydrogenase)	USPAT; EPO; JPO; DERWEN T	2002/01/13 15:29
2	BRS	L4	8	3 and (phthal\$ or mal\$ or succin\$)	USPAT; EPO; JPO; DERWEN T	2002/01/13 15:32

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L6	21	(sens\$ or biosens\$ or detect\$ or measur\$) and electrode\$ and (PQQ\$ or pyrrlo\$) and glucon\$	USPAT; EPO; JPO; DERWEN T	2002/01/13 14:12
2	BRS	L7	2	(glucose near1 dehydrogenase) and (glucon\$ near5 (stabiliz\$ or additive))	USPAT; EPO; JPO; DERWEN T	2002/01/13 14:15
3	BRS	L8	815	(glucose dehydrogenase).ti.	USPAT	2002/01/13 14:20
4	BRS	L9	9	(glucose near1 dehydrogenase).ti.	USPAT	2002/01/13 14:24
5	BRS	L10	19	(glucose near1 dehydrogenase).ti. or (glucose near1 dehydrogenase).ab.	USPAT	2002/01/13 14:24
6	BRS	L11	4	10 and (gluconic or gluconate)	USPAT; EPO; JPO; DERWEN T	2002/01/13 14:25

=> d his full

(FILE 'HOME' ENTERED AT 13:50:39 ON 13 JAN 2002)

FILE 'CAPLUS' ENTERED AT 13:51:04 ON 13 JAN 2002

L1 212 SEA ((GLUCOSE DEHYDROGENASE) AND (GLUCON?))/AB  
L2 10 SEA L1 AND (STABIL?)/AB  
D 1-10 ALL

=> d his full

(FILE 'HOME' ENTERED AT 12:58:26 ON 13 JAN 2002)

FILE 'REGISTRY' ENTERED AT 12:58:42 ON 13 JAN 2002

L1           2 SEA GLUCONIC ACID/CN  
            D ALL

FILE 'CAPLUS' ENTERED AT 12:59:44 ON 13 JAN 2002

L2           126 SEA (SENSOR OR BIOSENSOR OR DETECT?) AND ELECTRODE? AND  
            (GLUCON?)  
L3           35 SEA L2 AND (PQQ? OR PYRROLO? OR DEHYDROGENASE)  
            D 1-35 ALL

FILE 'STNGUIDE' ENTERED AT 13:02:36 ON 13 JAN 2002

L4           0 SEA (SENS? OR MEASUR?) AND ELECTRODE? AND (GLUCON?)

FILE 'CAPLUS' ENTERED AT 13:12:45 ON 13 JAN 2002

L5           191 SEA (SENS? OR MEASUR?) AND ELECTRODE? AND (GLUCON?)  
L6           32 SEA L5 AND (PQQ? OR PYRROLO? OR DEHYDROGENASE)  
            D 10 ALL  
L7           4 SEA L6 NOT L3  
            D 1-4 ALL

FILE 'STNGUIDE' ENTERED AT 13:13:32 ON 13 JAN 2002

L3 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2002 ACS

RN 526-95-4 REGISTRY

CN D-Gluconic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Gluconic acid, D- (8CI)

OTHER NAMES:

CN **Gluconic acid**

AR 133-42-6

FS STEREOSEARCH

MF C6 H12 O7

CI COM

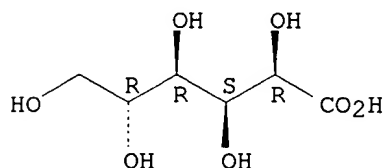
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DIOGENES, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



#### Calculated Properties (CALC)

CODE	PROPERTY	VALUE	CONDITION	NOTE
HD	H donors	6		ACD (1)
HAC	H acceptors	7		ACD (1)
MW	Molecular Weight	196.16		ACD (1)
LOGP	logP	-3.175+/-0.852		ACD (1)
LOGD	logD	-3.18	pH 1	ACD (1)
LOGD	logD	-3.91	pH 4	ACD (1)
LOGD	logD	-6.69	pH 7	ACD (1)
LOGD	logD	-7.17	pH 8	ACD (1)
LOGD	logD	-7.27	pH 10	ACD (1)
PKA	pKa	3.35+/-0.35	Most Acidic	ACD (1)
SLB.MOL	Molar Solubility	>=1 mol/L	pH 1	ACD (1)
SLB.MOL	Molar Solubility	>=1 mol/L	pH 4	ACD (1)
SLB.MOL	Molar Solubility	>=1 mol/L	pH 7	ACD (1)
SLB.MOL	Molar Solubility	>=1 mol/L	pH 8	ACD (1)
SLB.MOL	Molar Solubility	>=1 mol/L	pH 10	ACD (1)

(1) Calculated using Advanced Chemistry Development (ACD) Software Solaris V4.67 ((C) 1994-2002 ACD)

4012 REFERENCES IN FILE CA (1967 TO DATE)

546 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

4023 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1

L4 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 110-16-7 REGISTRY

CN 2-Butenedioic acid (2Z)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Butenedioic acid (Z)-

CN **Maleic acid (8CI)**

OTHER NAMES:

CN 2-Butenedioic acid, (Z)-

CN cis-1,2-Ethylenedicarboxylic acid

CN cis-2-Butenedioic acid

CN cis-Butenedioic acid

CN Maleinic acid

CN Malezid CM

CN Scotchbond Multipurpose Etchant

CN Toxilic acid

FS STEREOSEARCH

MF C4 H4 O4

CI COM

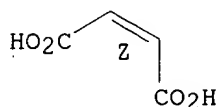
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER, TULSA, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

9345 REFERENCES IN FILE CA (1967 TO DATE)

2696 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

9365 REFERENCES IN FILE CAPLUS (1967 TO DATE)

5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

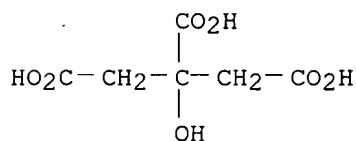
L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS  
 RN 110-15-6 REGISTRY  
 CN Butanedioic acid (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN **Succinic acid (8CI)**  
 OTHER NAMES:  
 CN 1,2-Ethanedicarboxylic acid  
 CN 1,4-Butanedioic acid  
 CN A 12084  
 CN Amber acid  
 CN Asuccin  
 CN Dihydrofumaric acid  
 CN Katasuccin  
 CN Wormwood acid  
 FS 3D CONCORD  
 MF C4 H6 O4  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,  
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSChem, DDFU, DETHERM\*, DIOGENES,  
 DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2,  
 GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*,  
 MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, SPECINFO,  
 SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

HO<sub>2</sub>C-CH<sub>2</sub>-CH<sub>2</sub>-CO<sub>2</sub>H

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

17334 REFERENCES IN FILE CA (1967 TO DATE)  
 1954 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 17363 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS  
 RN 77-92-9 REGISTRY  
 CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Citric acid (8CI)  
 OTHER NAMES:  
 CN 2-Hydroxy-1,2,3-propanetricarboxylic acid  
 CN 3-Carboxy-3-hydroxypentane-1,5-dioic acid  
 CN Aciletten  
 CN Chemfill  
 CN Citretten  
 CN Citro  
 CN F 0001 (polycarboxylic acid)  
 CN Hydrocerol A  
 CN Uro-trainer  
 FS 3D CONCORD  
 DR 12262-73-6, 43136-35-2, 245654-34-6  
 MF C6 H8 O7  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,  
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*,  
 DIOGENES, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT,  
 ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA,  
 MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*, PHARMASEARCH,  
 PIRA, PROMT, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN,  
 USPAT2, USPATFULL, VETU, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

36859 REFERENCES IN FILE CA (1967 TO DATE)  
 2437 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 36945 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)